New 4-pyrazolyl quinoline derivatives, have plant fungicidal activity
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Patent Family

Patent Number	Kind	Date	Application Number	Kind	Date	Week	Type
FR 2795726	A1	20010105	FR 998596	A	19990630	200119	B
WO 200102385	A1	20010111	WO 2000FR1816	A	20000629	200119	
AU 200062884	A	20010122	AU 200062884	A	20000629	200125	

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Patent Details

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Abstract:
FR 2795726 A1

NOVELTY Pyrazoles (I), their geometric and optical isomers and tautomeric forms, their salts, N-oxides, and complexes with metals and metalloids, their preparation, and fungicidal compositions containing them, are new.

DETAILED DESCRIPTION Pyrazoles of formula (I), their geometric and optical isomers and tautomeric forms, their salts, N-oxides, and complexes with metals and metalloids, their preparation, and fungicidal compositions containing them are new.

R1, R2=alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkoxysulfonyl, alkenyl, alkynyl, alkenyloxy, alkynyloxy, alkenylthio, alkynylthio, cycloalkyl, heterocyclyl, cycloalkylalkyl, heterocyclylalkyl, alkyl carbonyl, alkenyl carbonyl, alkynyl carbonyl, alkyl carbonyloxy, alkenyl carbonyloxy, alkynyl carbonyloxy, alkoxy carbonyl, alkenyloxy carbonyl, alkynyloxy carbonyl, cycloalkyl carbonyl, heterocyclyl carbonyl, cycloalkyloxy carbonyl, cycloalkylalkyloxy carbonyl, heterocyclyloxy carbonyl, heterocyclylalkoxy carbonyl, thioalkylthio carbonyl, alkoxythio carbonyl, aryl, heteroaryl, aryl carbonyl, heteroaryl carbonyl, OH, SH, COOH, NO2, CN, CNS, N3, NR4R5, -CONR4R5, - CSNR4R5, or C(=NR4)R5, or taken together they form a 5-7 membered ring containing 2-3 O or N atoms which may be substituted by one or more halogen, alkyl, or haloalkyl groups;

R3=H, alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkoxysulfonyl, alkenyl, alkynyl, alkenyloxy, alkynyloxy, alkenylthio, alkynylthio, cycloalkyl, heterocyclyl, cycloalkyl carbonyl, heterocyclyl carbonyl, cycloalkylalkyl, heterocyclylalkyl, alkyl carbonyl, alkenyl carbonyl, alkynyl carbonyl, alkyl carbonyloxy, alkenyl carbonyloxy, alkynyl carbonyloxy, alkoxy carbonyl, alkenyloxy carbonyl, alkynyloxy carbonyl, alkoxy carbonyl, alkenyloxy carbonyl, alkynyloxy carbonyl, cycloalkyloxy carbonyl, cycloalkylalkyloxy carbonyl, heterocyclyloxy carbonyl, heterocyclylalkoxy carbonyl, aryl, heteroaryl, aryl carbonyl, heteroaryl carbonyl, OH, SH, COOH, NO2, CN, CNS, N3, NR4R5, -CONR4R5, - CSNR4R5, or C(=NR4)R5;

R4 and R5=H, alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkoxysulfonyl, alkenyl, alkynyl, alkenyloxy, alkynyloxy, alkenylthio, alkynylthio, cyano alkyl, alkoxy alkyl, alkoxy carbonyl alkyl, cycloalkyl, heterocyclyl, cycloalkyl alkyl, heterocyclyl alkyl, alkyl carbonyl, alkenyl carbonyl, alkynyl carbonyl, cycloalkoxy carbonyl, cycloalkyl alkoxy carbonyl, heterocyclyloxy carbonyl, aryl, heteroaryl, arylcarbonyl, heteroaryl carbonyl, arylalkyl, heteroaryl alkyl, SH, COOH, NO2, CN, CNS, N3, OR6, NH2, alkyl and dialkyl amino, amino alkyl, alkyl amino alkyl, or dialkyl amino alkyl;

R6=H, alkyl, aryl, heteroaryl, arylalkyl, heteroaryl alkyl, cycloalkyl, cycloalkyl alkyl, heterocyclyl, heterocyclyl alkyl, or alkoxy carbonyl alkyl;

Y1-Y6=H, halogen, OH, SH, NO2, CNS, N3, CN, pentafluorosulfonyl, alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio, haloalkylthio, alkoxyalkyl, haloalkoxy alkyl, alkyl thioalkyl, haloalkyl thioalkyl, cyanoalkyl, cyanoalkoxy, cyanoalkylthio, alkylsulfinyl, haloalkyl sulfinyl, alkyl sulfonyl, haloalkyl sulfonyl, alkoxy sulfonyl, cycloalkyl, halocycloalkyl, alkenyl, alkynyl, alkenyloxy, alkynyloxy, alkenylthio, alkynylthio, aryl or heteroaryl optionally substituted, amino, alkylamino, dialkylamino, acylamino, aminoalkyl, N-alkyl aminoalkyl, N,N-dialkyl aminoalkyl, acylamino alkyl, COOH, CONH2, N-alkyl- or N, N-dialkyl carbamoyl, alkoxy carbonyl or alkylcarbonyl, or two adjacent groups Y1-Y6 form a 6-membered aromatic ring or a methylenedioxy group

all of these groups being optionally substituted by a group as defined below.

INDEPENDENT CLAIMS are also included for preparations of (I).

ACTIVITY Fungicide.

In tests against Septoria nodorum on wheat, plants were treated with an aqueous suspension of the compound then, after 24 hours, infested with the spores and left for 72 hours at 18degreesC in a humid atmosphere. The effect was noted after 15-20 days, and showed that an application rate of 500 g/ha gave at least 50% protection, and gave total protection in some cases.

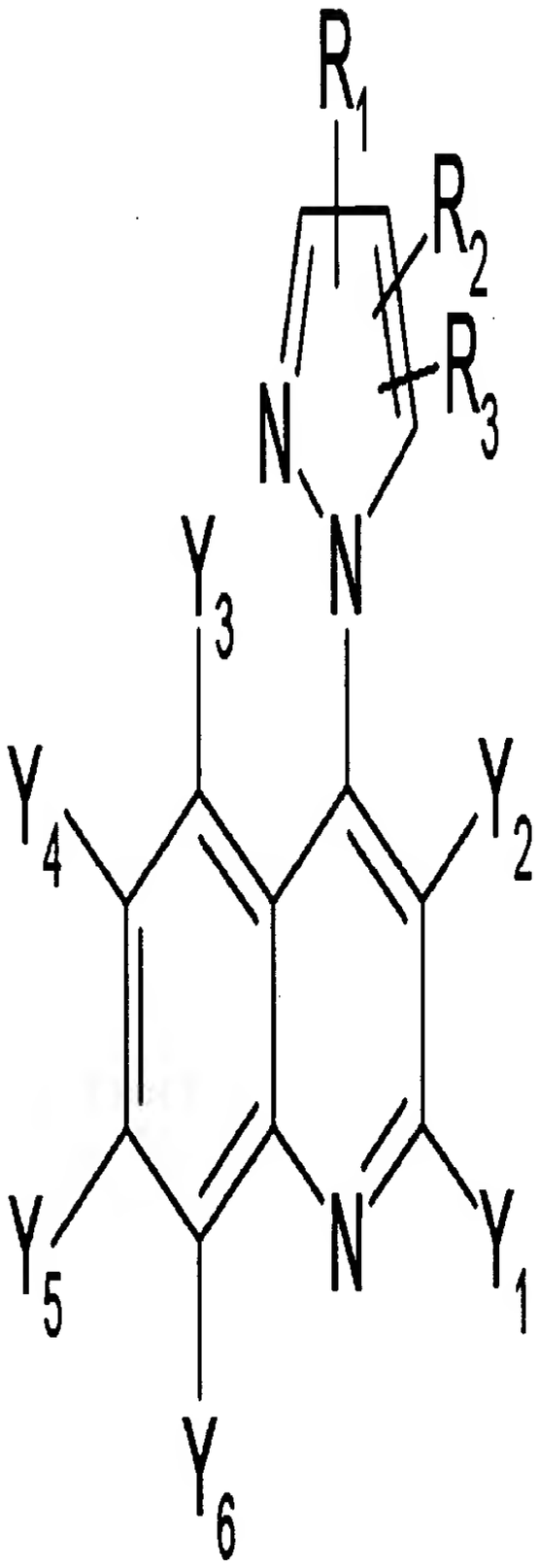
MECHANISM OF ACTION None given.

USE Plant fungicides, especially useful in the treatment of cereals, fruit trees, maize, cotton, flax, rapeseed, vines, forest trees, peas, potatoes, and beet, including genetically modified plants.

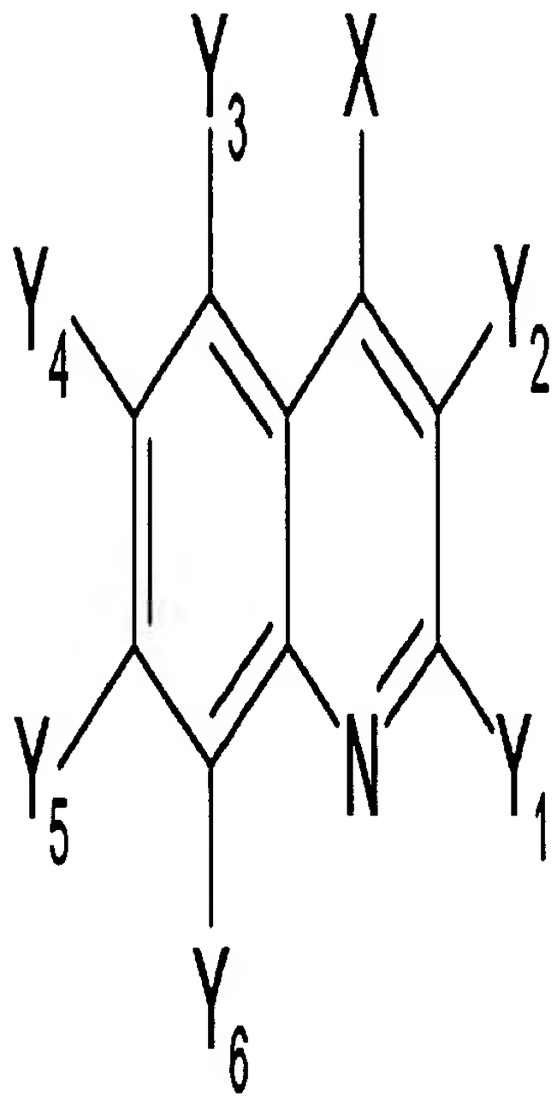
pp; 175 DwgNo 0/0

Technology Focus:
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - The compounds may be prepared by e.g. reaction of a quinoline (II) with a pyrazole (III) in the presence of a base.

X=halogen.



(I)



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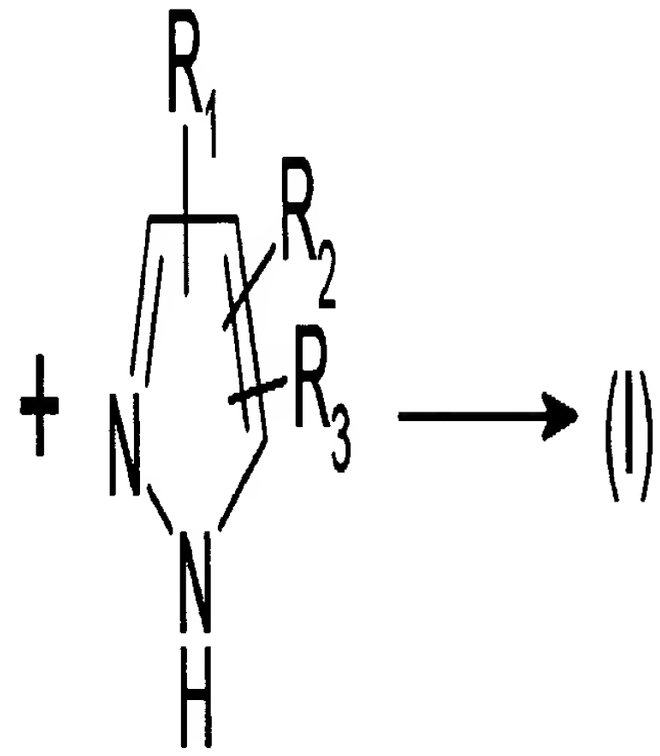

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